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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,673	02/14/2000	Meenarachagan Vishnu	FORE-54	7017

7590 07/07/2004  
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EXAMINER

TRAN, THIEN D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 07/07/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/503,673

Applicant(s)

VISHNU, MEENARACHAGAN

Examiner

Thien D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 16-20, 26-29 and 32-38 is/are rejected.  
7) ☒ Claim(s) 6-15, 21-25, 30 and 31 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 16, 26-28, 33-35, 38 are rejected under 35 U.S.C. 102(b) as being participated by Ganmukhi et al (U.S Patent No. 5,850,399 B1).

Regarding claims 1, 16, Ganmukhi discloses schedulers a a data scheduling for service according to QoS (server) comprising:

a second level schedule (first level generator), hereinafter first level generator, associated with groups of connections, figure 1; and

a third level schedule (second level generator), hereinafter second level generator, associated corresponding to the groups of connections, said first level generator identifying which connections in the second level generator corresponds to a group in the first level generator that are to be considered for service, said second level generator identifies the connections corresponding to the group to receive service from the server, said second level generator in connection with said first level generator, col.3 lines 1-15.

Regarding claims 26, 33-35, 38 Ganmukhi discloses an apparatus for serving connections comprising:

a server QoS, col.3 line 6;  
a queue (memory), hereinafter memory, in which data of the connections is stored, said memory connected to the server, col.3 line 40; and  
a hierarchical scheduler which schedules when the data of the connections in the memory is to receive service from the server, said scheduler connected to said server and said memory, figure 1.

Regarding claim 27 Ganmukhi discloses an apparatus for serving connections comprising:

a data scheduling for service according to QoS (server), col.3 line 6;  
a queue (memory), hereinafter memory, in which data of the connections is stored, said memory connected to the server, col.3 line 40; and  
a scheduler which schedules when the cells of the connections in the memory are to receive service from the server based on intercell interval, wherein an intercell interval is how long the server take to service a cell, the scheduler connected to the server and memory, col.3 lines 60-65.

Regarding claim 28, Ganmukhi discloses the latency of cells/second (intercell intervals) is inversed proportional to number of bits/second (bandwidth), col.4 lines 1-10.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganmukhi et al (U.S Patent No. 5,850,399 B1) in the view of Lahat et al (U.S Patent No. 6,417,944).

Regarding claims 2, 3, 5, 17, 18, 20 Ganmukhi does not disclose a filter mechanism, which filters out (idle connections) inactive groups of connections associated with schedules in the hierarchical schedule. However, it would have been obvious to one having ordinary skill in the art to have a schedule used the filter to filter inactive connections so that memories in the schedule can be utilized more efficient.

Regarding claim 4, 19 Ganmukhi discloses a first level schedule (zero level generator), hereinafter zero level generator, associated with groups corresponding with groups, said zero level generator in connection with the first level generator, said zero level generator identifying which groups in the first level generator correspond to a group in the zero level generator that are considered for service, figure 1, col.3 lines 1-10.

5. Claims 29, 32, 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganmukhi et al (U.S Patent No. 5,850,399 B1) in the view of Lahat et al (U.S Patent No. 6,417,944).

Regarding claims 29, 32, 36, 37 Ganmukhi does not disclose that bitmap generator for generating schedule bitmap indicating the group to be scheduled for service, which would have been well known method for generating data bits in

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communication encoder. Lahat, for example, discloses a generator for generating bitmap so that data can be composed by number of bits in a proper form for communication. See col.10 lines 1-20. Therefore, it would have been obvious to one having ordinary skill in the art to implement the feature of generating bitmap so that data can be composed by number of bits in a proper form for communication.

***Allowable Subject Matter***


6. Claims 6-15, 21-25, 30, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thien Tran



STEVEN NGUYEN  
PRIMARY EXAMINER